Ectropion-Entropion: A Tale of a Lax Lid

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Ectropion
- Lid falls away or is pulled away

Involutional Ectropion: Etiology
- Horizontal eyelid laxity
- Lateral canthal tendon laxity
- Medial canthal tendon laxity
- Loss of tarsoligamentous elasticity
- Shortened external skin/muscle
- Orbicularis muscle tone loss

Involutional Ectropion: Evaluation
- Horizontal lid laxity
  - Distraction test: lower lid can be pulled away from globe by 10mm or more
  - Snap back test
    - normal: lid “snaps back” quickly
    - mild laxity: slow return
    - moderate laxity: incomplete return unless patient blinks
    - severe laxity: incomplete return even after blink

Involutional Ectropion: Evaluation
- Medial canthal tendon laxity
  - Pull lid laterally: punctum should not move laterally more than 2mm

Involutional Ectropion: Evaluation
- Lateral canthal tendon laxity
  - Rounded appearance of lateral canthus
  - Pull lid medially: should not move medially more than 2mm
Involutional Ectropion: Treatment
Temporary management
- Lubrication
- Lateral aspect of lower eyelid can be taped upwards
- Tape eyelids closed at night

Involutional Ectropion: Treatment
Surgical
- Lateral canthal strengthening:
  full-thickness wedge of eyelid at lateral canthus is removed and the lateral canthus re-attached to orbital periosteum

Involutional Ectropion: Treatment
Surgical
- Medial spindle:
  excise posterior lamellar fusiform wedge of conjunctiva, retractors and tarsus.
  Close with absorbing sutures.

Floppy Eyelid Syndrome
- Horizontal laxity of the upper eyelid
- Seen in obese males
- Upper lid everted during sleep causing mechanical abrasion and chronic papillary conjunctivitis
- Treatment: horizontal lid tightening

Cicatricial Ectropion: Etiology
- Vertical tightness of eyelid skin
- Thermal or chemical burn
- Mechanical trauma
- Laser resurfacing, chemical peel
- Surgery, lower lid blepharoplasty
- Longstanding involutional ectropion
Cicatricial Ectropion: Evaluation

- Place thumb beneath lateral canthus, push lid laterally and superiorly, excessive tension on lid margin indicates contraction
- Upward distraction test: tethering to inferior orbital rim
- Mouth opening: will pull down on lower eyelid

Cicatricial Ectropion: Treatment

- Release scar bands
- Z-plasty
- Skin graft
  - upper eyelid
  - postauricular
  - infraclavicular
  - supraclavicular

Inflammatory Ectropion: Etiology

- Dermatologic conditions
  - acne rosacea
  - atopic dermatitis, eczema
  - herpes zoster infections
  - actinic damage
  - ichthyosis
Inflammatory Ectropion: Treatment
- Allergic reagent should be stopped
- Steroid ointments or injections
- Surgical correction as for cicatricial ectropion

Mechanical Ectropion
- Etiology
  - eyelid tumor
  - eyelid and periocular edema
  - orbital fat herniation
  - malignant orbital lymphoma
  - low-riding poorly-fitted eyeglasses
- Treatment
  - directed at the cause

Mechanical Ectropion

Paralytic Ectropion: Etiology
- Facial or 7th cranial nerve palsy
- Bell’s palsy
- Parotid gland surgery
- Acoustic neuroma

Paralytic Ectropion: Evaluation
- Distinguish between upper motor (stroke, tumor) and lower motor (Bell’s palsy) neuron lesion
- Bell’s palsy: complete unilateral involvement of face
- BAD syndrome:
  - lacks Bell’s phenomenon
  - has corneal anesthesia
  - dry eye

Paralytic Ectropion: Treatment
- Conservative
- Lubrication
- Taping the eyelids
- Moisture chamber
- Punctal plugs
- Extended-wear bandage contact lens
- Botulinum toxin injection into levator to cause ptosis
- Medical: treat underlying Bell’s palsy
- Oral prednisone: 60 to 80mg/day for 5 days then taper over next 5 days
- Acyclovir 400mg: 5 times daily for 10 days
- Tarsal strip
- Moisture chamber
- Directed at the cause

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Paralytic Ectropion: Treatment Surgery
- Lateral canthal strengthening
- Tarsorrhaphy: suturing upper and lower eyelids together
- Passive upper eyelid animation: gold weight
- Dynamic eyelid animation: palpebral spring

Congenital Entropion
- Rare, familial
- Improper development of the retractor aponeurosis insertion into the lower border of the tarsal plate
- Distinguish from epiblepharon
  - seen in Asians
  - overriding of orbicularis oculi and skin

Spastic Entropion
- Etiology
  - ocular irritation or inflammation
  - benign essential blepharospasm (BEB)
- Evaluation
  - complete ophthalmic exam
  - history for BEB
- Treatment
  - ocular irritation: lubrication
  - ocular inflammation: steroid
  - BEB: botulinum toxin injection

Entropion
- Eyelid margin turns in against the globe

Congenital Entropion: Treatment
- Tarsal fixation of Hotz

Involutional Entropion: Etiology
- Horizontal lid laxity
- Disinsertion of lower eyelid retractors (capsulopalpebral ligament)
- Preseptal orbicularis muscle override
Involutional Entropion: Evaluation

- Snap back test
- Orbicularis override test
  - patient squeezes eyes closed
  - observe for superior migration of preseptal orbicularis
- Poor eyelid tone
- Lower eyelid margin stays below limbus
- Deep inferior fornix
- White line below inferior tarsal border: detached capsulopalpebral fascia

Involutional Entropion: Treatment

Conservative

- Tape eyelid away from globe
- Bandage soft contact lens
- Botulinum toxin injection

Surgical

- Transverse rotation sutures
  - 3 dissolvable sutures passed through lid from conjunctival side out and through skin and tied

Cicatricial Entropion: Etiology

- Trachoma
- Cicatricial pemphigoid
- Stevens-Johnson syndrome
- Dermatologic conditions

Cicatricial Entropion: Evaluation

- Digital eversion test
  - inhibit blinking, pull down eyelid
  - involutional: remains in proper vertical orientation
  - cicatricial: resumes inward rotation-shrinkage or retraction of the posterior lamella
**Cicatricial Entropion: Treatment**

- Mild: tarsal fracture – incise middle of tarsus
- Severe: mucous membrane graft - spacer

**Eyelash Abnormalities**

- Trichiasis: Misdirection of eyelashes arising from their normal site of origin.
  - Treatment
    - Epilation
    - ProLectro electrolysis unit
    - Argon/Diode laser
    - Cryotherapy

- Distichiasis: rare, congenital growth of an extra row of eyelashes arising from the meibomian gland orifices.
  - Treatment: lid splitting with cryotherapy

**Questions?**